

**REMARKS**

Claims 9-16 were previously pending in the application. This Amendment amends claims 9-16. New claims 17-18 are added. Claims 9, 14, and 17 are independent.

**The Specification Objections**

The disclosure is objected to because of informalities. This Amendment amends the specification to obviate this objection.

Applicants respectfully request withdrawal of this objection.

**The Rejections under 35 U.S.C. § 112, second paragraph**

The Office Action rejects claims 10 and 14-16 under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This Amendment amends the claims to particularly point out and distinctly claim the subject matter which applicant regards as the invention, thereby overcoming these rejections. Applicants respectfully request withdrawal of these rejections.

**The Claimed Invention**

In conventional dishwashers, a washing liquid is heated during individual sub-program steps and the washing solution wets the dishes located in the dishwasher by using a spraying system having spray arms. As a result of the continuous circulation and action of the washing solution on the dishes and uniform heating of the washing solution, the dishes, the washing container, and adjacent materials, such as insulating material, are heated in addition to the washing solution. Thus, a large amount of energy used is expended by the system to heat the washing solution, the dishes, the washing container, and adjacent materials.

In stark contrast, the present invention recognizes that the desired cleaning performance may be achieved by controlling only the temperature of the washing solution.

An embodiment of the present invention, for example as recited in independent claim 9, is directed to a method of heating the washing liquid to a predetermined temperature in a flow section that is separate from the spray system to an extent such that the washing liquid does not substantially impinge on the crockery in the dishwasher as the washing liquid is being heated in the flow section, whereupon the washing liquid is heated without substantially wetting the crockery in the dishwasher; and after the washing liquid has been heated to the predetermined temperature, delivering the washing liquid into contact with the crockery in the dishwasher, whereupon the crockery in the dishwasher that essentially has not been heated is heated by the washing liquid.

In another embodiment, independent claim 14 is directed to a dishwasher comprising a heater for heating the washing liquid to a predetermined temperature, the heater being separate from the spray system to an extent such that the washing liquid does not substantially impinge on the crockery in the dishwasher as the washing liquid is being heated by the heater, whereupon the washing liquid is heated without substantially wetting the crockery in the dishwasher; and the spray system being operable to spray the washing liquid onto the crockery in the dishwasher after the washing liquid has been heated to the predetermined temperature, whereupon the crockery in the dishwasher that essentially has not been heated is heated by the washing liquid.

In this manner, the present invention provides a separate flow section with a heating device that only heats the washing liquid, thereby reducing an amount of energy expended by the dishwasher.

#### **The Rejections under 35 U.S.C. § 102**

In the Office Action, claims 9 and 13-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by the Eberhardt, Jr. et al. reference (US 4,689,089).

Applicants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [...] The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131.

Independent claim 9, is directed to a method for executing a washing program in a dishwasher, the method comprising, within a dishwasher having a spray system for spraying a liquid onto crockery that has been disposed statically in the dishwasher, providing a washing liquid to be eventually sprayed by the spray system, as a washing program is executed, onto the crockery in the dishwasher, heating the washing liquid to a predetermined temperature in a flow section that is separate from the spray system to an extent such that the washing liquid does not substantially impinge on the crockery in the dishwasher as the washing liquid is being heated in the flow section, whereupon the washing liquid is heated without substantially wetting the crockery in the dishwasher, and after the washing liquid has been heated to the predetermined temperature, delivering the washing liquid into contact with the crockery in the dishwasher, whereupon the crockery in the dishwasher that essentially has not been heated is heated by the washing liquid.

In another embodiment, independent claim 14 is directed to a dishwasher comprising a crockery retainer that statically retains crockery that is to be washed, and a heater for heating the washing liquid to a predetermined temperature, the heater being separate from the spray system to an extent such that the washing liquid does not substantially impinge on the crockery in the dishwasher as the washing liquid is being heated by the heater, whereupon the washing liquid is heated without substantially wetting the crockery in the dishwasher; and the spray system being operable to spray the washing liquid onto the crockery in the dishwasher after the washing liquid has been heated to the predetermined temperature, whereupon the crockery in the dishwasher that essentially has not been heated is heated by the washing liquid.

As explained above, these features are important for providing a separate flow section with a heating device that only heats the washing liquid, thereby reducing an amount of energy expended by the dishwasher.

In stark contrast, the Eberhardt, Jr. et al. reference relates to a conveyor-type commercial dishwashing machine. The Eberhardt, Jr. et al. reference very clearly discloses a conveyor 14 that conveys the crockery through the commercial dishwasher. Such a commercial dishwasher having a conveyor 14 clearly is different from the claimed method for a dishwasher, and dishwasher, which statically retains crockery that is to be washed. Indeed, the Eberhardt, Jr. et al. reference specifically distinguishes itself from such a stationary or static-type dishwasher. See, e.g., col. 1, lines 44-60.

For at least these reasons, the Eberhardt, Jr. et al. reference does not disclose each and every feature of independent claims 9 and 14.

Applicants respectfully request withdrawal of this rejection.

**The Rejections under 35 U.S.C. § 103**

In the Office Action, claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Eberhardt, Jr. et al. reference in view of the Peterson reference (US 4,936,289). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Eberhardt, Jr. et al. reference in view of the Helwig, Jr. reference (US 4,331,484). Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Eberhardt, Jr. et al. reference in view of the Upadhye et al. reference (US 6,571,564). Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Eberhardt, Jr. et al. reference in view of the Cushing reference (US 4,249,090).

Applicants respectfully traverse these rejections.

**The Rejection over the Eberhardt, Jr. et al. reference in view of the Peterson Reference**

Applicants respectfully submit that the Examiner may not rely upon the Peterson reference under 35 U.S.C. § 103 because the Peterson reference is non-analogous art.

To qualify as analogous art, a reference must either be (1) within the field of Applicants endeavor, or if not, (2) the subject matter logically would have commended itself to an inventor's attention in considering his or her invention as a whole. See

M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

In the present instance, the Peterson reference clearly is not within the field of Applicants' endeavor. The field of Applicants' endeavor is the field of home appliances and, more particularly, dishwashers.

In stark contrast, the Peterson reference is within the completely different and unrelated field of hot water heaters and plumbing systems for a house or building. The field of endeavor of hot water heaters and plumbing systems for a house or building clearly is different from the field of endeavor of dishwashers.

For at least the foregoing reasons, the Peterson reference clearly is not within the field of Applicants' endeavor.

As set forth above, a reference that is not within the field of Applicants endeavor may qualify as analogous art if the subject matter logically would have commended itself to an inventor's attention in considering his or her invention as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

In the present instance, the subject matter of the Peterson reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole.

Properly considered as a whole, the present invention is directed to a method of heating washer liquid in a dishwasher that conserves energy.

In stark contrast, the Peterson reference very clearly is concerned with the completely unrelated problem of circulating hot water from a hot water heater to a plurality of usage stations, such as outlets, taps, or faucets in a home or building. See, e.g., Abstract; see also col. 5, lines 11-26.

The subject matter of circulating hot water from a hot water heater to a plurality of usage stations, such as outlets, taps, or faucets in a home or building according to the Peterson reference logically would *not* have commended itself to an inventor's attention in considering, as a whole, ways to reduce energy consumption in a dishwasher. The

Peterson reference has absolutely nothing to do with solving the problem of reducing energy consumption in a dishwasher, as in the present invention as a whole.

For at least these reasons, the subject matter of the Peterson reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole, and therefore, the Peterson reference does not qualify as analogous art.

Moreover, Applicants respectfully submit that one of ordinary skill in the art would not have had an apparent reason to combine the disclosure of the Peterson reference with the disclosure of the Eberhardt, Jr. et al. reference to arrive at the claimed invention as a whole. Moreover, the Office Action does not establish an adequate rationale for making such a combination.

Applicants respectfully request withdrawal of this rejection.

**The Rejection over the Eberhardt, Jr. et al. reference in view of the Helwig, Jr. Reference**

Applicants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including wherein the heating the washing liquid to the predetermined temperature in the flow section includes ceasing the heating of the washing liquid at a latest when the crockery in the dishwasher has reached the predetermined temperature for the washing liquid, as recited in claim 11. As explained above, these features are important for conserving energy.

The Helwig, Jr. reference very clearly does not teach or suggest these features. Indeed, as the Office Action points out, the Helwig, Jr. reference only teaches that the tank heaters are turned off once the heater water has been dispensed on the rack of soiled dishes. This is not the same as ceasing the heating of the washing liquid at a latest when the crockery in the dishwasher has reached the predetermined temperature for the washing liquid, as recited in claim 11.

Moreover, in contrast to the claimed invention, the Helwig, Jr. reference is concerned with a conveyor-type commercial dishwasher, not a household appliance

dishwasher. In the Helwig, Jr. reference, the crockery is conveyed on a conveyor belt and does not remain in the dishwasher. Thus, there would be no reason to monitor the temperature of the crockery in the dishwasher.

Applicants respectfully submit that the Helwig, Jr. reference does not remedy the deficiencies of the Eberhardt, Jr. et al. reference. Moreover, Applicants respectfully submit that one of ordinary skill in the art would not have had an apparent reason to combine the disclosure of a commercial dishwasher of the Peterson reference with the disclosure of the Eberhardt, Jr. et al. reference to arrive at the claimed invention as a whole. Moreover, the Office Action does not establish an adequate rationale for making such a combination.

For at least these reasons, none of the applied references discloses or suggests the subject matter defined by claim 11.

Applicants respectfully request withdrawal of this rejection.

**The Rejection over the Eberhardt, Jr. et al. reference in view of the Upadhye et al. Reference**

Applicants respectfully submit that the Examiner may not rely upon the Upadhye et al. reference under 35 U.S.C. § 103 because the Upadhye et al. reference is non-analogous art.

To qualify as analogous art, a reference must either be (1) within the field of Applicants endeavor, or if not, (2) the subject matter logically would have commended itself to an inventor's attention in considering his or her invention as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

In the present instance, the Upadhye et al. reference clearly is not within the field of Applicants' endeavor. The field of Applicants' endeavor is the field of home appliances and, more particularly, dishwashers.

In stark contrast, the Upadhye et al. reference is within the completely different and unrelated field of baby bottles. The field of endeavor of baby bottles clearly is different from the field of endeavor of dishwashers.

For at least the foregoing reasons, the Upadhye et al. reference clearly is not within the field of Applicants' endeavor.

As set forth above, a reference that is not within the field of Applicants endeavor may qualify as analogous art if the subject matter logically would have commended itself to an inventor's attention in considering his or her invention as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

In the present instance, the subject matter of the Upadhye et al. reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole.

Properly considered as a whole, the present invention is directed to a method of heating washer liquid in a dishwasher that conserves energy.

In stark contrast, the Upadhye et al. reference very clearly is concerned with the completely unrelated problem of facilitating nighttime feedings by programming when a baby bottle should be heated or cooled. See, e.g., Abstract; see also col. 2, lines 33-48.

The subject matter of heating or cooling baby bottles logically would *not* have commended itself to an inventor's attention in considering, as a whole, ways to reduce energy consumption in a dishwasher. The Upadhye et al. reference has absolutely nothing to do with solving the problem of reducing energy consumption in a dishwasher, as in the present invention as a whole.

For at least these reasons, the subject matter of the Upadhye et al. reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole, and therefore, the Upadhye et al. reference does not qualify as analogous art.

Moreover, Applicants respectfully submit that one of ordinary skill in the art would not have had an apparent reason to combine the disclosure of the Upadhye et al.



reference with the disclosure of the Eberhardt, Jr. et al. reference to arrive at the claimed invention as a whole. Moreover, the Office Action does not establish an adequate rationale for making such a combination.

Applicants respectfully request withdrawal of this rejection.

**The Rejection over the Eberhardt, Jr. et al. reference in view of the Cushing Reference**

Applicants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a switch for manually switching an operation of the heater between an on condition in which the heater is operable to heat the washing liquid and an off condition in which the heater does not heat the washing liquid, as recited in claim 16. These features are important for preventing the temperature difference between the heated washing liquid and the crockery, such as crystal or ceramic, from being sufficient to cause damage, such as cracking or hairline cracks, to the crockery as a result of the jump in temperature.

The applied references very clearly do not teach or suggest these features. Indeed, the Office Action does not even allege that the applied references contemplate these problems. Instead, the Office Action merely asserts that the Cushing reference discloses a switch arrangement for switching the operation of a wash program or cycle between on and off, not for switching the operation of a heater on and off, as recited in claim 16.


The Cushing reference does not remedy the deficiencies of the Eberhardt, Jr. et al. reference. Indeed, none of the applied references discloses or suggests the subject matter defined by claim 16.

Applicants respectfully request withdrawal of these rejections.

**CONCLUSION**

In view of the above, entry of the present Amendment and allowance of Claims 9-18 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. Howard', is positioned above the printed name.

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